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2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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Implementation of the action plan of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons*

Report submitted by Belgium

The present report is submitted pursuant to action 20 of the action plan contained in the Final Document of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT/CONF.2010/50 (Vol. I)). That action plan stipulates that "States parties should submit regular reports, within the framework of the strengthened review process for the Treaty, on the implementation of the present action plan, as well as of article VI, paragraph 4 (c), of the 1995 decision entitled 'Principles and objectives for nuclear non-proliferation and disarmament', and the practical steps agreed to in the Final Document of the 2000 NPT Review Conference, and recalling the Advisory Opinion of the International Court of Justice of 8 July 1996."

Pillar I. Nuclear Disarmament

1. Policy

Belgium is firmly committed to the goal of a world without nuclear weapons. This goal can be achieved through a gradual process of concrete, irreversible and verifiable reductions. Belgium is in favour of a building blocks approach, which can complement the pursuit of a step-by-step approach, since it allows the possibility of parallel and simultaneous steps.

We are convinced that the Non-Proliferation Treaty should remain the essential foundation for the pursuit of nuclear disarmament. No other instrument is better defined or better equipped to guide us on the path towards the global zero. It is therefore essential that the NPT becomes truly universal. We call on the three remaining States, India, Israel and Pakistan, to join the NPT as non-nuclear weapon states. At the same time, true universality is only achievable if the integrity of the Treaty is preserved. Those who violate the Treaty should be held accountable and return to compliance.

* The present document is issued without formal editing.

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Belgium is in favour of realistic proposals that lead to practical and effective disarmament. We call on all States with nuclear weapons to reduce the size of their nuclear arsenals, to diminish the role of nuclear weapons in military doctrine and security policies and to decrease the operational readiness of nuclear weapons systems. All nuclear weapon states should increase transparency with respect to their arsenals.

We have welcomed the conclusion of the New START Treaty between the United States of America and the Russian Federation. We are encouraged by the progress already achieved in the implementation of this Treaty. We call on the United States of America and the Russian Federation to seek further reductions of all types of nuclear weapons, including strategic, non-strategic, deployed and non-deployed weapons. In this regard, we have publicly welcomed the proposals formulated by President Obama in June 2013 to further deepen the reductions and to move beyond the current posture.

We encourage the United States of America and the Russian Federation to include non-strategic nuclear weapons in the next round of their bilateral nuclear weapons reduction and to further develop transparency and confidence-building measures. A first step could be to report on the current status of the implementation of the 1991 and 1992 Presidential Nuclear Initiatives and to consider verification measures.

Belgium acknowledges the progress made by the United Kingdom and France in reducing their nuclear stockpiles.

We firmly believe that every country, including non-nuclear-weapon states, has a role to play in creating an environment conducive to nuclear disarmament. As a member of the North Atlantic Treaty Organization (NATO), Belgium has actively contributed to the elaboration of the new Strategic Concept (2010) and the Deterrence and Defense Posture Review (2012). We have managed to further reduce the role, numbers and readiness of nuclear weapons in NATO's defense posture, to confirm the de-targeting and de-alerting status of the nuclear components and to promote increased transparency and nuclear confidence building measures. NATO acknowledges that the circumstances in which any use of nuclear weapons might have to be contemplated are extremely remote. Belgium remains in favour of reciprocal confidence building and transparency measures with Russia and increased understanding of NATO's and Russia's non-strategic nuclear force posture in Europe.

Belgium is concerned about the catastrophic humanitarian impact of a nuclear detonation. This concern underpins all our efforts to promote nuclear disarmament. Belgium joined other nations to express our concern over the issue in two joint statements, which were pronounced by Australia at the sixty-eighth and the sixty-ninth sessions of the United Nations General Assembly. Belgium participated in the international conferences on the humanitarian impact of nuclear weapons in Oslo (2013), Nayarit (2014) and Vienna (2014). In cooperation with civil society, Belgium promotes disarmament and non-proliferation education, which, inter alia, contributes to raising public awareness of the catastrophic consequences of the use of nuclear weapons.

2. *Comprehensive Nuclear-Test-Ban Treaty (CTBT)*

A number of essential elements are still missing from the international disarmament and non-proliferation architecture. The entry into force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) is one of them. The Treaty makes an important contribution towards preventing the proliferation of nuclear weapons and the development of new types of weapons. Belgium calls on all States concerned to adhere to the CTBT without further delay. A special responsibility rests with the Annex 2 states, which hold the key to the entry into force of the CTBT. We believe that adherence should not be made contingent upon the action of other states. Belgium ratified the CTBT on 29 June 1999.

As a member of the European Union, Belgium participates actively and financially in the efforts to promote the universalization of the CTBT. Belgium served as Vice President of the conference on facilitating the entry into force of the Comprehensive Nuclear-Test-Ban Treaty, which was held in New York in September 2013. Belgium supported the Final Declaration adopted at that conference. Belgium associated itself with the Joint Ministerial Statement on the Comprehensive Nuclear-Test-Ban Treaty, adopted at the seventh ministerial meeting on the Comprehensive Nuclear-Test-Ban Treaty, which was held in New York in September 2014.

In order to strengthen the verification regime of the Preparatory Commission of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Belgium contributes to the efforts to minimize the interference of radio-xenon releases with the capability of the International Monitoring System to detect nuclear explosions. The Belgian Nuclear Research Centre (SCK•CEN), in collaboration with the Institute for Radioelements (IRE) and the Royal Meteorological Office, and financed in the context of the EU Council Decision V program, is studying possible options to mitigate radio-xenon stemming from medical isotope production facilities. The study examines the possibilities for absorbing radio-xenon isotopes by different materials and methods and develops a filtration system. By mitigating radio-xenon emissions from civilian applications, future emissions — which remain a key indicator to monitor and verify nuclear activity — would be more reliably attributed to nuclear explosions.

The Institute for Radioelements (IRE) was the first major worldwide radioisotope producer to take the initiative to voluntarily sign a pledge with the CTBTO in June 2013 to cooperate with the CTBTO to mitigate the effects of noble gas emissions. IRE will provide the Secretariat of the Treaty with its accurate radio-xenon monitoring data contributing to the optimization of the modelization models of the noble gas background. The IRE has thereby pioneered the path for a higher involvement of the radiopharmaceutical companies in the non-proliferation efforts.

Furthermore, the relevant Belgian institutions are dedicating important R&D efforts to develop materials to efficiently trap radioxenon from medical isotope facilities and to build a mobile demonstration set-up. Other R&D efforts in support of CTBTO are related to the modeling of atmospheric transport and dispersion, especially concerning uncertainty quantification of such model calculations.

Belgium will host a CTBTO Workshop on "Signatures of Medical and Industrial Isotope Production" (WOSMIP) in May 2015, in close cooperation with the US Department of Energy. This workshop will be an important milestone to

better understand the issue of radio-xenon releases and to deepen the dialogue between producers and the scientific community.

Belgium also supports the IAEA Coordinated Research Project (CRP) "Sharing and Developing Protocols to Further Minimize Radioactive Gaseous Releases to the Environment in the Manufacture of Medical Radioisotopes, as Good Manufacture Practices."

3. *Conference on Disarmament — Fissile Material Cutoff Treaty (FMCT)*

Another crucial building block is the conclusion of a Fissile Material Cutoff Treaty (FMCT), aimed at banning the production of fissile materials for nuclear weapons or other nuclear explosive devices. Belgium supports the work undertaken by the Group of Governmental Experts, which was created by UNGA resolution 67/53. We hope that their final report will contain practical recommendations which will help to pave the way for the negotiation of a FMCT, which is the next logical step along the path towards a world without nuclear weapons. Pending such a Treaty, all States possessing nuclear weapons should maintain or declare a moratorium on the production of fissile material for nuclear weapons purposes.

The revitalization of the UN disarmament machinery, and in particular of the Conference on Disarmament, is a priority for Belgium. Belgium will continue to actively support all efforts to overcome the present stalemate in the Conference, which includes the failure to agree on a program of work. Belgium believes that the Conference should start its work immediately on the basis of a substantive and balanced program of work, with the commencement of negotiations on a FMCT as its priority.

4. *Verification*

Belgium supports initiatives seeking to identify and address the technical challenges related to the verification of nuclear disarmament, notably through its participation to the "International Partnership for Nuclear Disarmament Verification."

5. *United Nations*

Within the framework of the United Nations, Belgium has supported a variety of resolutions calling for nuclear disarmament, reducing the operational readiness of nuclear weapons and other related issues. Belgium is co-sponsor of the General Assembly Resolutions on the Comprehensive Nuclear-Test-Ban Treaty; United Action Towards the Total Elimination of Nuclear Weapons; the Treaty on a Nuclear Weapon-Free Zone in Central Asia; the Hague Code of Conduct against Ballistic Missile Proliferation; Preventing the Acquisition by Terrorists of Radioactive Sources; and Measures to Prevent Terrorists from Acquiring Weapons of Mass Destruction.

Belgium participated actively in the work of the "Open-ended Working Group to develop proposals to take forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons", established by General Assembly Resolution 67/56 of 3 December 2012. Belgium joined other States in submitting a working paper on "Building Blocks for a World without Nuclear Weapons."

Pillar II. Nuclear Non-Proliferation

1. *Safeguards*

Belgium supports the essential role of the International Atomic Energy Agency (IAEA) in providing the international community with credible assurances about the exclusively peaceful nature of nuclear programs. Belgium is of the view that a Comprehensive Safeguards Agreement, together with an Additional Protocol, constitutes the current verification standard. We call on all States that have not done so to conclude such agreements at the earliest possible date. Belgium brought into force a safeguards agreement in 1977 and an Additional Protocol was concluded in 1998.

Belgium supports the work of the IAEA in the field of safeguards. The Belgian support program to the IAEA safeguards includes the participation in dedicated work groups, training of inspectors and research.

2. *Export controls*

Belgium contributes to non-proliferation efforts through its system of robust export controls, which ensure that nuclear materials and nuclear technology will be used for peaceful purposes only. Export control is governed by the dual use Regulation N°428/2009 of the European Union complemented by a dedicated national legislation. Belgium is a member of the Zangger Committee (ZC) and the Nuclear Suppliers Group (NSG). Nuclear transfers between Belgium and other States are fully consistent with the guidelines under the ZC and NSG.

3. *United Nations Security Council Resolution 1540*

Belgium applies the provisions of United Nations Security Council Resolution 1540 (2004). As a member of the European Union, Belgium contributes to the efforts to facilitate the implementation of this resolution throughout the world.

4. *Nuclear security*

A) *Legal framework*

Belgium has a robust nuclear security regime for its civilian nuclear installations, which we continue to enhance. Over the last years, Belgium has strengthened and updated its legal and regulatory framework regarding the physical protection of nuclear installations. Legislation has been adopted in compliance with the relevant international conventions, in particular with the Convention on the Physical Protection of Nuclear Material (CPPNM) and its 2005 Amendment. The modification of the Penal Code in 2013 has made our legislation fully consistent with the 2005 Amendment, which we ratified in January 2013. It is also fully consistent with the International Convention on the Suppression of Acts of Nuclear terrorism (ICSANT), which we ratified on 2 October 2009. In addition, our legal and regulatory framework reflects the NSS 13 (INFCIRC/225) document as revised and other documents from the IAEA Nuclear Security Series.

As a contribution to the efforts of the IAEA to facilitate adherence to the 2005 CPPNM Amendment, Belgium hosted a Regional workshop for French-speaking African States in Brussels in 2013.

B) Nuclear security culture

Nuclear security is for Belgium an essential element of a responsible nuclear program. In this context, securing nuclear material in Belgium has been, from the beginning, the purpose of a culture of constant vigilance.

Following the Fukushima Daichi accident, Belgium applied the stress tests of the European Union to all its major nuclear installations. Moreover, Belgium took the initiative to also perform stress tests relating to man-made events, including malicious events, such as air crashes and cyber-attacks.

Belgium commends the value of the Nuclear Security Advisory Services of the IAEA. In 2014, Belgium hosted an International Physical Protection Advisory Service (IPPAS) mission. Belgium has also provided experts to a number of IPPAS missions in other States.

The Belgian Nuclear Research Centre (SCK•CEN) continues to develop the innovative accelerator-driven reactor project MYRRHA (Multi-purpose hybrid research reactor for high-tech applications), with the main objective of providing the research community with a highly performing and versatile installation to carry out material and fuel testing, notably in relation to the safety of the current and future fission and fusion reactors. It will also to demonstrate the transmutation of long-lived and most toxic radioactive waste and support fundamental nuclear research.

C) Nuclear Security Summit process

Belgium has participated in the Nuclear Security Summit (NSS) process since its start in Washington DC in 2010. This process has improved the security of nuclear material worldwide and thus reduced the chances that such material could fall into the hands of terrorists or criminals. Apart from fully supporting the outcome of these Summits, Belgium has voluntarily committed itself to a number of gift baskets. At The Hague NSS in March 2014, Belgium joined the gift baskets "Strengthening Nuclear Security Implementation", "Information Security Initiative", "Enhancing the Security of the Maritime Supply Chain", and "Nuclear Security Training and Support Centers/Centers of Excellence."

Belgium has made a voluntary national contribution to the Nuclear Security Fund of the IAEA each year since 2010. Our total contribution since 2010 amounts to 1,5 million USD. The Nuclear Security Fund is further supported by significant contributions from the European Union.

D) Minimization of sensitive nuclear material

Belgium is committed to the efforts to minimize the use of highly enriched uranium (HEU) for civilian purposes, when economically and technically feasible.

Belgium has been working towards the timely conversion to low enriched uranium (LEU), subject to regulatory approval, of:

- the high performance research reactor BR2 of the Nuclear Research Centre (SCK•CEN) , as soon as an appropriate high density fuel has been qualified and licensed for this purpose;

– the processing facility of the Institute for Radioelements (IRE) for medical radio-isotopes.

With regards to the first point, the SCK•CEN is actively leading the international efforts to design and qualify in the BR2 reactor different high density LEU fuels, which are candidates to replace HEU fuel, not only for its own reactor BR2, but also for foreign high performance reactors in France and the United States of America.

With regards to the second point, the IRE has started the necessary research and development activities and technical investment studies to timely convert its processing facilities to LEU in close cooperation with the appropriate institutions of the United States of America.

While this complex process is underway, we continue to guarantee the production of medical radioisotopes, an essential contribution to human healthcare worldwide.

In 2014, Belgium transferred to the United States of America significant quantities of excess HEU and separated plutonium, for which use was no longer foreseen, in collaboration with the appropriate institutions of the United States of America.

E) Radioactive Sources

Belgium applies the principles of the revised IAEA Code of Conduct on the Safety and Security of Radioactive Sources. Belgium is a cosponsor of the biannual United Nations General Assembly resolution "Preventing the acquisition by terrorists of radioactive sources".

5. Other international initiatives

Belgium is a member of the Proliferation Security Initiative (PSI), an international initiative aimed at preventing the spread of weapons of mass destruction, with a particular focus on the illegal trade and the transport of weapons of mass destruction and related material.

As a member of the G7 Global Partnership against the Spread of Materials and Weapons of Mass Destruction, Belgium has contributed to projects aimed at preventing the proliferation of sensitive material.

Belgium is a member of the Global Initiative to Combat Nuclear Terrorism (GICNT), which was created in 2006 with the aim to strengthen the capacity to prevent, detect and respond to nuclear terrorism.

6. Nuclear-Weapon-Free Zones

Belgium acknowledges the contribution Nuclear-Weapon-Free Zones can make to regional and global peace and security, on the basis of agreements freely arrived at by the States of the regions concerned. We welcome the signing by the nuclear weapon states of a Protocol to the Treaty on a Nuclear-Weapon-Free Zone in Central Asia in May 2014.

Belgium is committed to the implementation of the 1995 NPT resolution on the Middle East. Belgium fully supports the efforts of the Facilitator, Finnish Ambassador Jaakko Laajava, to convene a conference in Helsinki on the

establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction. We regret that the conference could not be held yet. We call on all States concerned to engage constructively and to agree as soon as possible on the practical arrangements for that conference.

7. *Compliance and other issues*

Ensuring compliance with non-proliferation commitments is a prerequisite for preserving the integrity of the Treaty. Belgium has condemned the nuclear test of February 2013 conducted by the Democratic People's Republic of Korea. Belgium has supported the strengthening of the United Nations Security Council sanctions regime against the DPRK.

Belgium supports the ongoing diplomatic efforts between the E3/EU+3 and the Islamic Republic of Iran aimed at reaching a comprehensive settlement that would guarantee the exclusively peaceful nature of Iran's nuclear program. Belgium has voluntarily contributed 150.000 EUR to fund the enhanced verification activities of the IAEA in Iran, in execution of the Joint Plan of Action, agreed between the E3/EU+3 and Iran in November 2013. Belgium has rigorously implemented the UNSC sanctions, as well as the additional sanctions that were imposed by the European Union.

We call on Syria to resolve the issue of its non-compliance with its Safeguards Agreement and to adhere to an Additional Protocol as soon as possible.

Pillar III. Peaceful uses of nuclear energy

Belgium fully supports the rights of States Parties to the peaceful use of nuclear energy as enshrined in the NPT. We are dedicated to international cooperation on the uses of nuclear energy for peaceful purposes. We have actively contributed to enhancing civil nuclear energy cooperation, notably through bilateral nuclear cooperation agreements and through EURATOM cooperation agreements.

The comprehensive system for nuclear export controls, described above, is also a tool that facilitates commerce by providing assurances that exported equipment is solely used for peaceful purposes.

Belgium supports the Technical Cooperation Program of the IAEA through its annual voluntary contributions. Belgium regularly accepts fellowships on its territory in the framework of this program.

Belgium contributes to the work of the IAEA, notably through the organization of workshops and training courses, and the participation in research programs. The Belgian Nuclear Research Centre (SCK•CEN) is founder of the "IAEA Underground Research Facilities Network".

Belgium supports the full implementation of the IAEA Action Plan on Nuclear Safety, adopted in September 2011.

Multilateral approaches to the nuclear fuel cycle can help to ensure nuclear fuel supply to States developing a nuclear energy program in the best safety, security and non-proliferation conditions. In this regard, Belgium contributes to the establishment of a LEU Fuel Bank in Kazakhstan, as a member of the European Union. The EU has contributed 20 million EUR and pledged up to another 5 million EUR to this project. Belgium calls on concerned parties to accelerate the conclusion of all necessary arrangements to make the start-up of this project possible.